Diabetes Management Practices

In December 2010, the U.S. Department of Health and Human Services published Healthy People 2020, a list of 10-year national objectives for improving the Americans' health. For three decades, Healthy People has established benchmarks and monitored progress over time in order to encourage collaborations across sectors, guide individuals toward making informed health decisions, and measure the impact of prevention activities.

Eye Exam: Diabetes is the leading cause of blindness among working-age adults. An annual eye exam allows for early detection and prompt treatment of diabetic retinopathy.

In Virginia, in 2009, 67.6% of adults with diabetes received an annual eye exam.

Healthy People 2020 Objective: (D-10) Increase the proportion of adults with diabetes who have an annual dilated eye exam to 58.7%.

Hemoglobin A1c: According to the CDC, glycemic control is essential for preventing diabetes-related complications. Hemoglobin A1c exams provide information on blood sugar levels over the prior two to three months. This indicator provides information about the quality of diabetes care provided and/or the quality of diabetes self-management.

A glycosylated hemoglobin A1c test (A1c) is a blood test performed by a doctor, nurse, or other health professional in a clinical setting. The test estimates the average amount of sugar in your blood over a three month period of time; this test is **not** the same as a daily blood sugar test performed at home.

In Virginia, in 2009, 72.8% of adults with diabetes had their A1c checked at least twice per year.

Healthy People 2020 Objective: (D-11) Increase the proportion of adults with diabetes who have a glycosylated hemoglobin measurement at least twice per year to 71.1%.

Dental Exam: Periodontal (gum/mouth) disease is associated with heart disease and stroke. As diabetes affects the peripheral vascular system, persons with diabetes are more susceptible to periodontal disease and tooth decay. Periodontal disease may also make it hard to control your blood glucose. It is very important that persons with diabetes receive at least an annual dental exam.

In Virginia, in 2008, 65.8% of adults with diabetes had an annual dental exam.

Healthy People 2020 Objective: (D-8) Increase the proportion of adults with diagnosed diabetes who have at least an annual dental exam to 61.2%.

Self Monitoring of Blood Glucose: Self-monitoring of blood glucose (blood sugar) is important for assessing treatment effectiveness and informing nutrition therapy, physical activity, and medications to achieve the best possible glucose control. Persons with diabetes should check their blood glucose levels at least once daily.

In Virginia, in 2009, 57.6% of adults with diabetes reported performing daily blood glucose checks.

American Diabetes Association Recommendation: blood sugar rates for persons with diabetes should be 90-130 before meals. It is implied that self-blood-glucose monitoring should be performed before each meal.

Healthy People 2020 Objective: (D-13) Increase the proportion of adults with diabetes who perform self-blood-glucose-monitoring at least once daily to 70.4%.

Foot Exam: According to the CDC, diabetes is the leading cause of non-traumatic lower extremity amputations. Persons with diabetes should have a comprehensive foot exam annually that includes checking pulses and sensation, evaluating general foot structure, and checking skin and nails for abnormalities.

In Virginia, in 2009, 73.4% of adults with diabetes received an annual foot exam.

Healthy People 2020 Objective: (D-9) Increase the proportion of adults with diabetes who have at least an annual foot exam to 74.8%.

Influenza Vaccination: Persons with diabetes are considered high-risk for having major complications if they contract the influenza (flu) virus. Persons with diabetes who are 65 years-old or older are at increased risk of dying from the influenza virus. Thus, all persons with diabetes are encouraged to receive annual influenza vaccines.

In Virginia, in 2009, 58.5% of adults with diabetes received a flu vaccine.

Healthy People 2020 Objective: (IID-12) Increase the proportion of high-risk adults who are vaccinated annually against seasonal influenza to 90% (80% for all adults ages 18-64; 90% for all adults age 65 and older).

Pnuemococcal Vaccination: Persons with diabetes are at increased risk of hospitalization, morbidity, and mortality associated with pneumonia. Persons with diabetes over 65 who contract pneumonia have an increased risk of dying.

Unlike the influenza vaccine, the pnuemococcal vaccine is **not** an annual vaccine. A person with diabetes should have the pneumococcal vaccine at least once in his/her lifetime.

In Virginia, in 2009, 45.3% of adults with diabetes reported ever having received a pnuemococcal vaccine.

Healthy People 2020 Objective: (IID-13) Increase the proportion of high-risk adults who are vaccinated again pneumococcal disease to 60% (90% for adults 65 and older).

Progress on diabetes management practices: Percent of adults with diabetes meeting Healthy People 2020 (HP2020) recommendations, Virginia, 2001-2009

Management Practice:	2001	2002	2003	2004	2005	2006	2007	2008	2009	Meets HP2020 goal?
Annual eye exam ***HP2020 Goal: 59%***	62.2%	63.3%	63.0%	64.7%	66.4%	66.7%	66.3%	67.3%	67.6%	✓
Hemoglobin A1c check twice per year ***HP2020 Goal: 71%***	71.5%	70.3%	71.7%	74.1%	77.9%	76.5%	75.6%	72.9%	72.8%	✓
Annual dental exam ***HP2020 Goal: 61%***	63.0%	60.2%	67.0%	67.6%	67.6%	64.6%	66.4%	65.8%	No data	✓
Daily blood sugar check ***HP2020 Goal: 70%***	50.1%	54.4%	55.5%	58.6%	61.0%	63.5%	60.4%	60.1%	57.6%	✗
Annual foot exam ***HP2020 Goal: 75%***	62.5%	69.8%	72.2%	72.9%	72.7%	71.0%	72.1%	72.2%	73.4%	✗
Annual flu vaccine ***HP2020 Goal: 90%***	52.2%	51.1%	49.5%	48.7%	48.8%	53.6%	57.0%	59.6%	58.5%	✗
Once ever pnuemococcal vaccine ***HP2020 Goal: 60%***	39.2%	39.7%	43.8%	45.7%	50.3%	51.0%	49.6%	46.8%	45.3%	✗

Sources: Behavioral Risk Factor Surveillance System, 2001-2009;
Centers for Disease Control and Prevention: Diabetes Data for Virginia; www.cdc.gov

Data notes: Three-year rolling averages were used to improve the accuracy of annual estimates. For example, the 2002 estimate is an average of data from 2001, 2002, and 2003. Two years of data were used when three were not available. Rates are age-adjusted based on 2000 U.S. Census data.